

# Available Town Funds

- Developed a priority list addressing future stormwater projects
- Consider a two-year improvement plan schedule to address the identified top priorities
- Balance from FY 13/14 = \$143,000
- Annual Revenue from Stormwater Fee = \$114,000
- Total funds available over the next two years is approximately \$371,000
- 2-Year Plan
  - Address #1 priority- “Red Drum” Ocean Outfall, Cost share with NCDOT for replacement & extension
  - Towns cost: \$250,000 split over 2-yr
  - Address other top priorities with remaining funds available



# Stormwater Priority Projects

- Composed a project list considering factors such as project benefit, area served, number of properties served, public safety, and project cost.
- Focus on main drainage arteries within the Town
- Top priorities identified are as follows;
  - "Red Drum" Ocean Outfall
  - S. Virginia Dare Trail (8<sup>th</sup> St. to Whalebone Junction)
  - S. Old Oregon Inlet Rd (NCSR 1243)
    - RFQ for a Comprehensive Drainage Study (deferred)
    - Culvert Pipe replacement plan for west side ditch
    - Roadway swale improvement plan in proximity of MP 18
- Neighborhood level improvements



# “Red Drum” Ocean Outfall

- To replace and to extend the ocean ward end of the existing pipe network
- This system serves the largest tributary drainage area/number of properties within the Town providing the greatest potential benefit.
- Design & Permitting Completed. Scheduled for tentative mid-September construction.
- Cost share between NCDOT & the Town.
- Towns portion \$250,000 divided into (2) \$125k payments; FY 14/15 and FY 15/16



# South Virginia Dare Trail (NC 12)

- Problem is standing water on the pavement after a significant rainfall event.
- Creates a localized public safety issue between vehicles & pedestrians.
- Coordinate with NCDOT to perform maintenance to reclaim infiltration areas.
- Similar in nature to maintenance performed by NCDOT on NCSR 1243 in 2013 w/no anticipated cost.



# South Nags Head

- Issue is a low-lying roadway w/minimal topography, high water table, & fragmented drainage network.
- Attempt to address in a phased approach;
  - Comprehensive Drainage Study (\$90k, deferred)
  - MP 18 improvements to increase available above ground storage for surface runoff, (FY 14-15, \$10k)
  - Ditch drainage pipe replacement, vegetative clearing, sediment removal, pipe cleaning
- \* Complete project scope, (FY 14-15, \$105k)
- \* Partial project scope, (FY 14-15, \$80k)



# South Nags Head



# Moving Forward

- Continue to investigate the conditions surrounding the identified problem areas.
- Compile, analyze, and assess data “in house” to assist in determining permanent solutions.
- Explore additional Funding Sources via grants and cost shares through
  - NCDENR
  - Clean Water Management Trust Fund
  - NCDOT
- Review Stormwater Utility Fees
  - Increase to Flat Fee Structure ?
  - Tiered Structure based upon impervious coverage ?



South Nags Head NCSR 1243 W. Side Ditch Inventory					
Total # of cross street culvert pipes:		33			
		Serviceable	Needs Replacement	Flow Observed	Pipe Covered w/ Veg.
Colony South Subdivision:	5	3	2	5	0
Private Driveways:	11	?	?	2	11
W. Side Court:	1	0	1	0	1
S. Creek Acres Subdivision:	9	1	9	6	1
Fire Hydrant Crossings:	6	6	0	4	0
Fire Station 21 Driveway:	1	1	0	1	0
		11	12	18	13



Priority	Project Name	Project Description	Benefit	Professional Fees	Estimated Construction Cost	Project Area Served	Ownership	Estimated # of Properties Served	Approximate Acreage	Public Safety Issue
1	"Red Drum" Ocean Outfall Replacement	To replace approximately 70' of the existing dual 27" dia. RCP ocean outfall pipes with 30" HDPE and extend 65' oceanward to restore to the original constructed length	The outfall was constructed in 1966 and with time as well as natural forces have damaged and degraded the outfall. This project will provide increased hydraulic performance at the pipe outlet in addition to establishing a greater pipe depth, mitigating existing sand blockages, which historically has impeded drainage flow. The "Red Drum" outfall serves the largest tributary drainage area in the north end of Town and is critical in providing drainage relief to the surrounding neighborhoods	N/A	\$250,000 spread out over 2-yr period, (\$125k per yr)	Nags Head Pond, Nags Head Acres, Eastern portion of Vista Colony, 2300 Block to 2700 Block S. Virginia Dare Trail, 2300 Block-2700 Block Memorial Ave., 2300 Block-2700 Block Wrightsville Ave., 2300 Block - 2700 Block Croatan Hwy.	NCDOT	500	426	Yes
2	S. Virginia Dare Trail	Perform Maintenance along the length of SVDT from 8th St. to Whalebone Junction	Scrape shoulders, create shallow swales to aid in stormwater collection and infiltration, minimize standing water on pavement which creates public safety issue	N/A	N/A	Commercial and Residential Development from 2100 block-7200 block along SVDT (NC 12)	NCDOT	400	230	Yes
3	S. Nags Head	Request for Qualifications to Engineering Firms and subsequent report to identify and evaluate potential alternatives to relieve flooding problems in South Nags Head	Investigate, analyze, and plan for a permanent solution to address chronic flooding problems in South Nags Head	\$90,000	N/A	8000 block - 10400 block along S. Old Oregon Inlet Rd. (NCSR 1243)	NCDOT	192	100	Yes
3A	S. Nags Head	NCSR 1243 W. Side Ditch Culvert Pipe Inventory & replacement	Investigate, analyze, and plan for a replacement of existing cross-street & cross-driveway drainage pipes within the existing drainageway in South Nags Head	\$5,000 for collection of survey data to establish "new" pipe inverts	\$100,000 for drainage pipe replacement w/ flared end sections, pavement patch, fill & erosion control	Can be phased in as part of a multi-year project	NCDOT	192	100	Yes
3B	S. Nags Head	NCSR 1243 MP 18 Drainage	Create additional above ground stormwater collection areas, providing additional storage for significant rainfall events, attempting to minimize localized pavement flooding	N/A	\$10,000 for swale establishment, shoulder grading, and seeding and stabilization	Selective Improvements from S. Creek Acres to 8400 Block SOOIR	NCDOT	57	16	Yes

